4. Archaic Cultures Adjacent to the Northeastern Frontiers of Mesoamerica

BEYOND THE NORTHEASTERN FRONTIERS OF MESOAMERICA LIES A DESERT LAND. ITS CULTURES, CARRIED BY SEMI-FOURNI AND GATHERERS VARIOUSLY CALLED "BARBARIANS," "WILD TRIBES." CHICHIMEC, ARE CENTERED ON THE NORTH MEXICAN STATES OF COAHUILA, NUVO LEON, AND TAMAULIPAS, SPREADING INTO ADJACENT PARTS OF MEXICO AND TEXAS (FIG. 1). EXCEPT FOR THE PERIODS OF THE CIVILIZATION plan of the Rio Grande, south of the city of San Luis Potosi, and between the Gulf of Mexico and the eastern skirts of the Sierra Madre Occidental. THE SOUTH OF TAMAULIPAS, SOUTH OF THE SOTO LA MARINA RIVER, WAS OCCUPIED DURING THE LATER PREHISTORIC PERIODS BY THE RUINS OF CHICHIMEN, INCLUDING THE BONITAS AND SIERRA MADRE REARADO. THEREFORE, IN THIS REGION I SHALL DISCUSS ONLY THE MORE ANCIENT, NON-MESOAMERICAN, OR PRE-MESOAMERICAN CULTURAL MANIFESTATIONS.


THE COASTAL PLAIN, BEGINNING WITH THE EXTENSIVE Dunes WHICH LIE THE COASTAL SUCCESSIONS, RISES SLOWLY FROM THE RIO GRANDE TO THE FRONT RANGES OF THE SIERRA MADRE IN MEXICO AND TO THE BAHIA BAY ARMADO IN TEXAS. IN MEXICO, THIS SMOOTH, MONOTONOUS TOPOGRAPHY IS BROKEN ONLY BY THE ISOLATED MOUNTAINS OF THE SIERRA DE TAMAULIPAS-SIERRA SANTA CARLOS AND THE STRIKE-SLIDE OF THE CUEN TRAIL IN THE VICINITY OF NUVO LEON, TAMALIPAS. IN TEXAS, THERE ARE NO MOUNTAINS AT ALL, EXCEPT LOCALIZED IRREGULARITIES HARDLY DESERVING A NAME. OTHER THAN THE COASTAL RIVERS OF TEXAS, ONLY THE RIO GRANDE AND A FEW SHORT WATERCOURSSES IN COASTAL TAMALIPAS DRAIN THE AREA. AGAIN, EXCEPT IN TEXAS, WHERE RIVERS CONSTITUTED BARRIERS,
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Drainage lines are short, shallow, and ephemeral. They are not select features of the landscape, nor were they significant factors in the aboriginal culture ecology. The biota is Tamaulipan, characterized by a flora consisting largely of mesquite and acacia, below and between which grow thorny shrubs and succulents (Goldman, 1951, p. 423).

The Sierra Madre province encompasses the eastern cordillera and its forest ranges. Its southern extensions consist of a series of north-south ranges separated by narrow valleys difficult of access. In the north the ranges shift direction toward the northwest and separate to form broader valleys often occupied by playa basins. The life zones range from Lower Aulral to Canarian, characterized by floral elements of mesquite and acacia, then oak-pine, piñon-madrone, and finally fir-aspen (Goldman, 1951, p. 429).

The drainage, when not interior, flows east onto the coastal plain and into the Rio Grande. The mountains, mostly of limestone, contain many caverns, caves, and shelters which were used by the aboriginal populations.

The central Mexican plateau is an arid region of playas basins and arroyo, isolated mountain masses. It has a typical basin-and-range topography with some of the higher mountains reaching 9000-10,000 feet. It is included within the Chihuahua-Zacatecas biotic province (Goldman, 1951, p. 421) and mainly within the Lower Aulral life zone, exhibiting a flora of mesquite, acacia, ocatillo, creosote bush, and many other desert shrubs and succulents. Some regions are Upper Aulral and, in the highest elevations, reach the pine and oaks of the Transition zone. For the most part, the mountains are of limestone and contain many propped, habitable sites.

The amount of culture-historical information from this immense area is small. The aboriginal population, sparse to begin with and not accustomed to political or religious domination or a sedentary way of life, did not take kindly to mission reduction or the encomienda system. Decimated by disease and fighting, the Indians disappeared rapidly after the establishment of Spanish rule, and none endured long enough to provide ethnohistorical information in any detail or extent. Archival sources are scarce at best, and what data they do contain are often colored by religious and evangelical motives which reduced their coverage and threw suspicion upon their objectivity and truth (Martínez del Río, 1944; Alessio Robbins, 1927, 1938; Beals, 1932).

Ethnographic evidences being nil and archival materials few and fragmentary, the archaeological record is little better. Fieldwork has been sparse in a huge area where cultural differences appear to have been small (although perhaps no less significant therefore) and where much more detailed work than usual is required to delineate the meaningful and important differences. At present writing, only two professional archeologists have made stratigraphic excavations in the area; surface surveys and collections from unstratified burial sites have been made by a few professionals and a handful of nonprofessionals; and there has been considerable looting by many people.

More serious, publication has been neglected, with a few exceptions; reports are not complete enough for more general purposes. I here refer primarily to the main (i.e., Mexican) sector of the area, more professional and usable work (as well as more looting) has been done in the related regions north of the Rio Grande. Even there, however, controlled excavations have not been numerous, and some of the resulting publications are not suitable for the refined cultural analysis required by the nature of the aboriginal remains and the cultures they represent.

Culture and Culture Sequence in Coahuila

This article will be developed from an archaeological base in the state of Coahuila, Mexico, because (1) I know the material here better than elsewhere; (2) there is more material in stratigraphic placement than for any other sector of the northeastern frontier; (3) there seem to be cultural relationships between Coahuila and virtually all the other sectors of the frontier; and (4) the material has been studied in sufficient detail to provide information on what may be called "interrelations," through which small cultural and chronological differences may be defined and compared with some expectation of significant results. Because all variation and their meanings cannot be discussed here I shall have to make many statements for which documentation is unpublished. A similar restriction affects the making of detailed concordances between the archaeological and the ethnohistorical data; therefore, the pertinent ethnohistorical sources are listed in the references, and the archaeological traits for which reasonably acceptable ethnohistorical counterparts exist are starred in the text.

From the earliest times of which we have knowledge to the latest there was a cultural continuum in Coahuila, belonging to what has been called the Desert culture (Jennings, 1958, pp. 70-72; W. W. Taylor, 1953, pp. 129-220). Many classes and types of artifacts are the same from bottom to top in the stratigraphic sequence. Variations

FIG. 1—NORTHEASTERN MEXICO AND ADJACENT TEXAS (mountain masses representational).
occur and relative frequencies change, but without doubt it is a single cultural tradition throughout its approximately 10,000 years. Within that tradition, however, we can distinguish three complexes. These are not to be thought of as "cultures" or separable entities in any patristic, ethnie sense but merely chronologically separable parts of the total inventory. In brief there was a single "culture" which lasted from bottom to top in our stratified deposits: at the beginning of this range were certain artifact types which later disappeared, and, toward the end, a new series of types were incorporated into the total inventory. These changes, early and late, may have been induced by outside influences or have been endogenous, but the important fact is that they occurred within a single cultural tradition.

In addition to these three complexes found in stratigraphic context, three others have been recognized but have yielded very little comparative and even less stratigraphic, information.

**Cienegas Complex**

The Cienegas complex is known from three sites. Two have been excavated stratigraphically—Frightful Cave (CM-98) and Fat Burn (CM-34); the third site (CM-65) had been vandalized and produced only spoil-pile materials. All three are in canyons opening into the Cuatro Cienegas Basin in central Coahuila (Fig. 1). The complex consists of a congeries of traits which were a small part of the total cultural corpus characteristic of the earliest human occupation of which we have knowledge in Coahuila.

Figure 2 illustrates examples of some sites included in this complex: 

- **moons of human hair**
- **torn-shell basket, agave souvenir-basket, fiber cross, narrow plaited band, shell of *Humboldtiana mexicana* Flaherty, twisted sandal, Frightful Cave and CM-65. (Photo, Smithsonian Institution.)**

**Recon mata** removed, agave souvenir-sandal, some from the bottom level of Frightful Cave gave a radiocarbon date of 6125±480 a.c. (Crane and Griffin, 1966, p. 1190); narrow plaited band; shells of *Humboldtiana mexicana* Flaherty, twisted sandal, Frightful Cave and CM-65. (Photo, Smithsonian Institution.)

**Coahuila Complex**

The Coahuila complex was the major cultural matrix in central and northern Coahuila from the earliest times to the latest known stratified deposit. It forms the greater part of the cultural corpus of which, however, the other recognized complexes were also parts. It is known in sites extending from the Rio Grande to the northern edge of the Coahuila District and from the front ranges of the Sierra Madre Oriental on the east to the Coahuila-Chihuahua border on the west. Four of these sites have been stratigraphically excavated: Frightful Cave, Fat Burn Cave, Nopala Shelter (CM-28), and CM-37 which was unexcavated and soon abandoned. The remaining are mortuary sites without stratigraphy or sites in which only unrecorded excavations were conducted or surface collections made. The earliest known dates range between 7600 and 7300 B.C.; the latest radiocarbon date is a.b. 185±250 from the top level of Frightful Cave (Crane and Griffin, 1966b, p. 1120). The latest cross-cultural, comparative date is in the 12th century, based on the finding of sherds of El Paso brown pottery on the surface of several sites which produced surface finds of Coahuila complex materials. From archival sources, however, it seems very probable that the Coahuila complex endured until the arrival of the Spaniards (de León, 1509; Beals, 1932; Martinez del Río, 1954; W. W. Taylor, 1960, p. 331).

The Coahuila complex was not static. Its forms underwent variation, even though the classes and types of artifacts remained notably constant. These modifications in time create a picture of cultural change which has both depth and breadth. Partly responsible for this was an environmental change, a gradual desertification affecting both the natural habitat and its human occupants (Gilmore, 1947, p. 183, L. Johnson, 1960, p. 170). It bore upon aboriginal populations particularly by way of changing its cultural ecology and making subsistence less secure. The result seems to have been a loss of cultural integration and stability and a consequent increase in group nomadism and typological variation, together with a decline in craftmanship. It also had the effect of shifting the balance of subsistence from animal to plant foods, of increasing the use of fibrous desert plants at the expense of woody plants, and possibly of increasing ceremonialism concerned with the dead. Toward the very end, it brought increasing cultural contacts with neighboring peoples.
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and an influx of material imports or foreign ideas, or both.

Throughout the temporal span of the Coahuila complex, the people, pursuing a nomadic, hunting-and-gathering way of life, occupied caves and shelters, but it is evident that the utilization of such sites was occasional and that most of the living was carried on in the open. An exception to this is the lower level of Frugal Cave, where floors prepared by the use of water suggest a more permanently and formally occupied habitation. Generally, however, when they did take shelter, the people seemed to choose particular sites which were used over and over again, whereas they made little or no use of others which today seem equally attractive. The preferred locations were near the mouths of canyons or within relatively easy access of the pediment slopes and the alluvial fans (locally called "monte") and the margins of the playa basins, i.e., places where plant and animal resources were the most accessible in variety. This exercise of choice implies very little population pressure, and this in turn implies a determinant to population growth.

Although the Spanish were horrified at the food of the aborigines, it seems hardly possible that scarcity was the cause of the small population; for people accustomed to eat what the north Mexican desert offers, there is really no scarcity of food (W. W. Taylor and González Bal, 1880). There is a considerable abundance of a localized and seasonal root whose exploitation required only mobility and free access to large tracts of land. The ethnoeconomic reactions of the Spanish were directed against the quality and kind of native food; they do not mention that the people were starving or that they worked very hard to obtain what they did eat. De León (1908, p. 40) says that they were provident and concerned only with the day’s food, not that of the morn. To the Europeans the diet seemed inadequate more from custom than from any real scarcity of resources. What, then, kept the population low and the people occupying only a relatively few of the available sites?

I suggest two answers to this question or, more exactly, a single subsistence dilemma with two points working somewhat at cross purposes: (1) the extremely low nutritive value of the principal dietary resources, the wild plant foods which required a tremendous amount of foraging in order to provide a bare subsistence, and (2) water, whose scarcity and localization put restrictive, i.e., just the opposite, pressures on the aborigines. Even in the more humid, early days, Coahuila was an arid and semiarid desert. The few running streams made water source and stringently localized. People could gather food and hunt almost anywhere, but had to return to a known and dependable supply of water. Furthermore, "dependency" would mean being able to count on finding the water available. This in turn would mean either fighting to maintain the availability or establishing some sort of social and/or political control. Since the availability of so vital a resource could hardly have been subject, on a day-in-day-out basis, to the vagaries and uncertainties of fighting, it seems most probable that there would have developed an accepted and somehow controlled territoriality based on recognized rights to water, much like the territoriality based on hunting rights in other parts of the world. The rational characteristic of the major plant resources and the need for abundant water supply because of their low quality would have made these territories large and mobility within them of prime importance. This mobility, wide-ranging but tied to water supply, I have called "oetherd nomadism" (W. W. Taylor, 1908). The radius of these waterbound wanderings would have been dependent on the types and amount of the seasonal food resources and on the quantity and distribution of water resources. Since water in northeastern Mexico is almost entirely confined to the mountain masses (except the Rio Grande and its few perennial tributaries), groups of people were probably localized around these features, occupying the canyons, mesas, and the skirting monte within easy reach of water and from which they could more easily exploit the surrounding lands: mountains, canyons, mesas, and flat. Experience in modern Coahuila shows that this pattern, with only minor modifications due to more elaborate technology, prevails today: people live in settlements around the fringes of the mountain blocks and know their own mountain and its immediate surroundings but are relatively ignorant and often fearful of other mountains and other people clustered around them.

Evidence from the Coahuila complex suggests that there were changes in the intensity of nomadism during the course of its existence. At first, during and just after the Cenegas complex, the culture was relatively sedentary and localized, and it showed internal evidence of being well integrated and stable. This was probably the classic period of "oethered nomadism." By the middle level of Frugal Cave, possibly owing to pressures caused by increasing desertification, cultural integration and stability appear to have weakened. This is inferred from a noticeably growing heterogeneity of cultural (artificial) form combined with a degeneration of craftsmanship. Increased nomadism is attested by a greater number of occupied sites and an extension of their distribution throughout much of Coahuila. Also of the Isthmic types from this middle period point to considerable cultural contact with outside areas. Finally, toward the end of the Coahuila complex, with the appearance of the Jara complex (discussed below), cultural integration seems to have been restored, evidently under the aegis of foreign influence and on a basis of "ringing," rather than "oethered," nomadism.
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In the Coahuila complex there are three major industries based on material of manufacture: wood, plant fiber, and stone. These three are bone, antler, hair, fur, hide, feathers, shell, minerals, seeds, and other plant products are very minor. Even the stone industry is a minor one in the early stages, although it becomes important in later ones. The ratio of stone to wood to fiber throughout Frightful Cave is approximately 1:6:20; these figures representing the average number of artifacts of the respective materials per cubic meter of deposit excavated within the site. In other sites, because of conditions of preservation, special circumstances of occupation, and probably later date, stonework is very much more abundant in relation to the other categories of material. All things considered, Frightful Cave gives the most realistic picture of aboriginal culture in ancient Coahuila.

Stone: Viewed as a whole, stonework appears to increase in quantity but to become less formalized and less internally integrated as time goes on. In the blade industry at the beginning, a few bifacial types, formalized and consistent, were quantitatively dominant, and bifacially chipped artifacts of a single form had many uses. In later times, artifacts of a single form and evidently of a single use were made by both bifacial and unifacial techniques. In other words, an original mode of form-technique with multiple use gave way to a mode of form-usage with multiple technique. Further, at any given point of time the numerically dominant types of blades were consistently produced by pressure flaking; the same types, when coming in or going out of fashion, were made by both pressure and percussion, the latter often being the more common. Gradually, unifacial blades in considerable typological diversity began to compete with the bifacial. Later, the numbers of unifacial types decreased although the total frequency was maintained; and still later, the proportional representation of unifacial and bifacial types began to decrease, whereas unretouched flakes with no typological consistency at all showed a marked proportional and absolute increase. These facts, it seems to me, indicate a definite tendency toward progressive formalization (already accomplished in bifacial blades at the moment of our first knowledge) and then a deformalization through time within the bifacial-unifacial blade categories. This implies a definite fluctuation in the typological conceptualization of the artisan himself. The blade industry in general shows a loss of craftsmanship, although possibly not utility, in the progression from bifacial to unifacial to utilized flake artifacts.

Points also show a definite formality at the start and a progressive deformalization evidenced by a proliferation of forms, virtually unantypeable, in the later epochs (with an ultimate re-formalization at a much later date in Jera complex times as described below). The earliest types are oval, "laurel leaf" in shape (Espeanossa and Fragua points, figs. 3 and 4; afisnis Lemna, Refugio, Acasola per Sulsin and Krieger, 1954). Overlapping these, but with something a little more formal, is a single type having a larger, contracting stem, frequently serrated, and with strong barbs (Jera point, fig. 5). Following these, and again overlapping somewhat, come a heterogeneous lot of notched and stemmed points, only a very few of which are enough alike to warrant being placed in types (figs. 3, 4, 5). Quantitatively, stone points are notably scarce in all stratigraphic levels, but the absolute frequency increases with time. One more thing about the points: at first, shape is consistent, while length, width, and therefore weight vary greatly; later, shape loses its consistency, and the other attributes tend toward stability, although they still have considerable range. These observations suggest that the early points, undoubtedly used for tippeting atlatl darts, could be of varying sizes, although in the beginning certain shapes were adhered
to with regularity. Later, possibly when the assemblage was giving way to the bow, points had to conform to a more rigid standard of weight and therefore size, but shape, for some reason, was no longer of as much concern to the artisans, possibly because, as seen in other analyses, the culture in general was becoming less formalized and probably less integrated, craftsmanship was breaking down, and disturbing outside influences were on the increase.

Metates of the slab variety have a wide distribution, although they are not numerous. This suggests that pounding and milling were not primary food-processing techniques or that these large and bulky artifacts were "brought up" in the deposits and represent cumulative use over long spans of time. Our present impression is that both these factors pertain, although other evidence shows that food preparation on metates was relatively less in the early epochs of the Coahuila complex. Some metates are pitted, indicating pounding of hard objects such as bones* or the walnuts whose remains are found in quantity in the early levels. Basin metates have not been found in excavated sites and seem to have a northerly and westerly distribution in Coahuila; we therefore believe them relatively late. Striations on metates indicate that manos were used in a longitudinal, straight movement. The manos are mostly arroyo cobbles of limestone; basalt and other stones are obviously foreign and generally late in the Cuatro Cienegas Basin sites. The majority of manos are pitted. There are no true rocker manos, although all manos are of the small, "one-hand" kind. Cores are not common even in sites, such as Fat Burro Cave and Nopal Shelter, which were certainly dwelling centers. This scarcity may be due to the fact that cores ended their careers as fire-rock, abundant everywhere. Only one artifact that could possibly have been used as a drill has been found; it was in the basement level of Frighful Cave (Fig. 6). Although we did not specifically search for burins (Epstein's finding of such implements in Texas (1968) postdated our laboratory work), none were identified, and my feeling is that none were present. Only seven choppers were found, an inexplicably small number in view of the quantities of wood and fibrous plants processed by the aborigines; they are of limestone and vary haphazardly made (Fig. 7). Of the six stone ornaments discovered (Fig. 8), one from Fat Burro Cave is of serpentine; the others are of the ever-present, ever-used, dull, local limestone. One was painted and another was lustrous black. Although unusual materials were known and a desire for color is in (slight) evidence, the aborigines apparently did not have much interest in ornament, color (the arrowheads are all of brightly colored stones), shine (calcite and serpentine were known and are common in the local rocks), or even in decoration. The few ornaments found were early. Bedrock mortars occur at 11 sites, mostly in the northern and western sectors of the state. Only two were in sheltered sites; obviously proximity to habitations of any sort, sheltered or otherwise, was not a prerequisite. Nearness to the habitat of plant foods, i.e., the moose, seems to have been a more compelling factor. Mortar holes are most commonly found in groups, and in many instances many or all of the holes are of equal utility, i.e., their depths are not unusually great, nor are they nascent. We therefore infer that many of the holes were used at the same time and that, if groups of women could gather to process food-stuffs in mortar holes away from habitation sites, either they did so under armed guard or the threat of attack was nil. We believe the latter to have been the case. Again the conjunctive point to some sort of social and/or political control, as with water supply. Rock grooves, the so-called "sharpening grooves" found in the Trans-Pecos of Texas (V. J. Smith, 1938, p. 223), have been found in 12 sites (Fig. 9). What they represent cannot be argued at this time, but they certainly were not used for sharpening any implement so far found in Coahuila; in fact, their nature would seem to preclude them from sharpening anything. Rock molded circles, the so-called "mesecarios," have been found at several locations in central and northern Coahuila in contexts of the Coahuila complex; this distribution does not take into account the 16 found along the Rio Grande in the area of the Diablos...
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Reservoir (W. V. Taylor and Gonzalez Bul, 1990). Their distribution is definitely northern (and also western in central Coahuila), geographically associated with the Rio Grande and its approaches. Limestone bars were found in Frightful Cave, Fat Burro Cave, and in Nepal Shelter, three of the four stratigraphically excavated sites (fig. 2). Whatever their aboriginal use, they were not natural in the sites but had been brought there by human agency. They bear no paint but many show signs of use, mostly rubbing but some pounding. Discolorations suggest grease, root, blood, lieutenant, and/or some combination of these. Although three of the five in Frightful Cave came from the bottom level (the other two were top level), evidence from the other sites indicates that they are relatively late. Similar objects have been found along the Rio Grande in northern Coahuila and Texas (Taylor and Gonzalez Bul, 1990; Epstein, 1969a, pp. 98-100; Archaeological Salvage Program, 1958, pp. 22-23).

Woool. The Coahuila complex was primarily concerned with wood and fiber and only secondarily with stone and other materials. Much of the stone was to have served for processing wood and fiber. In the bottom level of Frightful Cave, for example, only two notched dart foreshafts (for stone points) were found, as against seven self-pointed wooden foreshafts. Also in the bottom level, there were 725 fiber artifacts, 273 wood, and only 46 stone.

Notched foreshafts increased from bottom to top, conjoining with the increase in stone projectile points to strengthen the content (fig. 10). The seven self-pointed wood foreshafts from the bottom level are long, heavy, and round, often with some of the bark still adhering; the other four (from the top level) are faceted to a quadrangular section, are much shorter and lighter, and retain no bark (fig. 10). The one bent foreshaft, very large, was found in the bottom level (fig. 10). Shaft wrenches are late in Frightful Cave, the only place where they have been found (fig. 11). Artists are of two types: (1) the mixed or Mexican variety with both groove and engaging hook is late in time; (2) the "male" type, represented by three examples, was fashioned from a hardwood limb with a catamount fork formed into a large and powerful hook. These were found one each in the three levels in Frightful Cave (fig. 12). Grooved clubs* were present in quantity and were of the three-groove, "southern" variety (Heizer, 1942); they ranged from bottom to top and were quite surely associated with bows as well as with atlatls (Kealter, 1935, p. 107). Only six digging sticks were found. There were 19 specimens of fire tongs for use in handling the hot racks for stone-boiling (fig. 11). The netting reel (fig. 11) is unique in the literature as far as can be ascertained. Two notched sticks, surely musical pegs,* come from the middle and top levels of Frightful Cave. Heartles for fire-drills were scarce, probably because used ones had been
thrown into the fire when discarded (fig. 13). Drilling was done in later times with the hearth placed across the body, but in early times with the hearth in line away from the body. Rubbed and scorched sticks show that fire was also made merely by rubbing two sticks together.*

Whether what we call “burial sticks” (fig. 14) belong with the Coahuilla complex or with the Jorn complex is uncertain; they have been found only in burial sites, lying loose on the surface with other cultural objects for which assignment to one or the other complex is undecided. They range from 430 to 1900 mm. in length and are generally made of the flowering stalks of Agave lechuguilla (?) or Yucca sp. (?). Their larger ends have been modified as straight-grooved, eyed, end-flattened, fiber-wrapped, or combinations of these. They pertain unquestionably to the burial complex. Another frequent component of this complex is the stick arc, closely either the frame of a carrying net* or a cradle. In all excavated sites were quantities of cut sticks, finished and unfinished pegs, and signs of a great amount of wood working (fig. 11).

Fiber. Fiber is by far the most abundant material of manufacture in the Coahuilla complex. Among the artifacts from Frightful Cave there is over 30 times as much fiber as stone, and over four times as much as wood. These figures pertain to manufactured artifacts only, not to fiber “matrix” items such as quills, grass-lined cache pits, food and manufacturing refuse, all of which were very common in the deposits.

Twisted-fiber cordage (mostly of Agave* and Hasperocolea) is the most abundant fiber artifact. From Frightful Cave were recovered 1190 pieces having a total length of 1857.4 m; there is less, both proportionately and absolutely, in Fat Burro Cave. Z-twist is most common, approximately 10 times 5-twist. Three- and four-ply cordage is extremely scarce.

Sandals are the next most numerous fiber artifact. In Frightful Cave there were 959 of them. The other sites did not produce nearly as many, even allowing for the differences in cubic meters excavated. In Frightful Cave twill-pad sandals (fig. 15) came from the bottom level. They were found in Fat Burro Cave also. Checker-pad sandals (figs. 15, 16) are a bit later, sewn sandals (fig. 16) later still, and braided ones

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*Figures 10-12—ARTIFACTS. Coahuilla complex. a, Jorn; b, and Mayan complexes. Top: fire-prom long. Middle: netting rod, three pegs, mangle-cord bone inlaid bevel probably of Mayan complex in Fat Burro Cave, two with loops, split-twig loop of Jorn complex, fire hearth, shaft wrench. (Photo Smithsonian Institution.)

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*Figures 13-15—ARTIFACTS. Coahuilla complex. a, Round-shaped male type, early Coahuilla complex, b, Two Mexican or “mexed” type vows. d, Engraved section of a shaft e, Terminal end. f, Hook end of a broken but complete Mexican type. From Frightful Cave and CM-78. (Photos, Smithsonian Institution.)
Cave the incidence of coiled basketry, proportional to other fiber categories, increases from bottom to middle to top (less than 10 per cent, around 30 per cent, and just over 50 per cent of the category, respectively); the same percentage sequence holds for five of its attributes: bundle foundation, half-rod foundation, split stitch, and each direction of stitch slant. This consistency is corroborating and supports the validity of the several distributions. Split stitch is present in 85 per cent of all coiled basketry in Frighful Cave; 63 per cent is of half-rod foundation, 31 per cent bundle, 8 per cent whole rod. The proportions in Pat Burro Cave are 76 per cent bundle, 14 per cent half-rod, and 8 per cent whole rod. These data suggest that bundle foundation is a relatively late trait and that whole rod is early. Interlocking stitch is both rare (only five specimens) and definitely early. Counterclockwise stitch on the work surface is superseded by clockwise. Convex work surface is slightly later than that of concave.

In plaited matting, both the twill and the checker techniques are present from bottom to top, but checker equals twill only in the top level of Frighful Cave (Fig. 15). Knotless matting ("coil without foundation") is present throughout the stratigraphic column (Fig. 20). Knotless matting is late in Frighful Cave. Twisted textiles appear early and in major proportion, seem to diminish, and then come on again late in the sequence (Figs. 21, 22). Virtually identical percentage progressions are seen in hard twining (mats, bags, baskets, fringes) and in soft twining (aprons, robes). In both hard and soft twining most of the early specimens have their well elements slanting from upper to lower, whereas in later times the reverse slant is more common. Rosettes (Fig. 23), radiocarbon dated at 1275±50 B.C. (Cuno and Griffin, 1956a, p. 1120), appear, from bottom to top in Frighful Cave, as 2 per cent, 24 per cent, 63 per cent; they have been found in only one other site, CM-37, in Cave Canyon near...
Fat Burro Cave and Nopal Shelter. Not counting those on sandals, there were 1761 knots of all kinds recovered. Of these, 91 per cent are comprised of square and overhand knots; the rest included granny, figure-eight, slip, sheet bend, half-latch, and one double-fold knot. In Frightful Cave more than 95 per cent of all knots were found in the front, in the fire-rock area, evidently left there during food preparation. The sheet bends were distributed middle and back, the half-latches front and middle. Vertically, knots follow quite closely the general trend of all fiber artifacts from the site; but sheet bends are concentrated in the middle level, half-latches in the top level. A series of scarifiers* (fig. 54) is significant in view of the fact that the archives refer to tattooing and bloodletting, for both of which such tools are admirably suited.

Bone. Bone awls and antler artifacts (fig. 25) have a "normal" vertical distribution in Frightful Cave, i.e., similar to that of the quantitatively major categories. The awls are definitely located front and back, i.e., in the fire-rock and waste areas. Not a single ulna awl has been found in Coohilla. Reduced canarium-bone awls are later, whereas those not modified are early. No bone beads were found in Frightful Cave, indicating that the considerable numbers found in other sites, particularly burial sites, are to be considered late and possibly as custo-
ary grave goods. Antler was used for both flakers and flaking awls. One set of deer antlers* was found in a burial with two deer mandibles crossed and tied into the branches, from the accompanying material this specimen is thought to belong to the latter part of the Cosulhua complex or to the Jura complex (Fig. 26). The archives speak of the use of deer skulls in ritual (Garcia Torres, 1896, p. 83). The concentration of miscellaneous bone remnants, especially deer, is early and diminishes in the upper levels of Frightful Cave. Notable is the proportionally great number of mandibles of many species of animal; the quantity would indicate that this is a cultural phenomenon possibly connected with the practice of breaking up, hence destroying, marrow and other large bones that could be powdered and eaten.* Rodent mandibles were found for reinforcement and used probably as gravers.

Other Materials. Shell* and minerals are extremely scarce, although a considerable amount of hematite* was found in Fat Burro Cave. Fur and processed hide* were quite common in Frightful and Fat Burro caves; fur cord was made and evidently woven into textiles.* Featherwork* was present but rare. Human foci were ap-
pallingly common in all sites where preservation permitted; natural functions seem to have been performed without regard for modesty, sanitation, or probably even the normal routine within an occupied habitation site.* Quids of fiber,* the sucked-out remnants of roasted succulents used for food, were everywhere and in great quantity, especially frequent in the fire-rock areas (W. W. Taylor, 1948, p. 172). Quantities of the narcotic mesquite bean, Sophora secundiflora, were found in Frightful Cave; this shrub grows in the canyon today but the presence of the beans in the cave surely represents purposeful collecting by humans (Campbell, 1958). Serpulid marine worm tubes (Protula superba) fashioned into beads were found in CM-64, a burial site; these have also been found in the Huco Caves (Cousgrove, 1947, p. 152), caves in northern Chihuahua (Sayles, 1936b, pl. 101), the Mogollon and Harris villages (Haury, 1936b, pl. 19, fig. 30), the colonial period at Snaketown (Gladwin et al., 1937, pl. 113), upper Rio Fuerte in southern Chihuahua (Ziegler, 1940, p. 25), San Cayetano and Bahocomari villages of southern Arizona (DíPeso, 1931, p. 196; 1936, p. 100), at Santa Ana near Zupe, Durango (Mason, personal communication). In the published reports, they have generally been identified as Vermutia, an erroneous identification which obscures the fact that the presently known locus of these animals is the Pacific Ocean, specifically off the Santa Barbara coast of southern California.

Jera Complex

The Jera complex consists of a number of traits which were part of the late cultural corpus in Coahuila. It is not a separate ethnocentric entity but rather a congeries of chronologically significant traits within a cultural continuum, the body of which we have
been calling the Coahuila complex. Possibly some of these traits are of foreign origin, specifically from the region of La Junta de los Ríos (Conchos-Rio Grande confluence).

The traits so far recognized are: small projectile points obviously for use on arrows* (fig. 27), small self-pointed wooden foreshafts also for arrows*, split-twig loops (fig. 11), small stone-sided flake scrapers sometimes notched, use of predominantly light-colored clay for chipped implements, use of basket and sandstone for manos, basin metates and rocker manos, bedrock mortars holes, rock midden circles, petroglyphs, ceramics. Only the first seven traits have been found in stratigraphic position; the rest are surface finds placed (sometimes uncertainly) in the complexes on the basis of variation and association.

The types of small points are identical, individually and collectively, with points already known from Texas, particularly from the central Texas and Bravo Valley aspects but also from certain east and south Texas facies such as Henrietta, Franklin, Galveston Bay, and Rockport (Jells, Davis, and Sturgis, 1909; Sulm and Krieger, 1954). Split-twig loops have been found in the Trans-Pecos, and at least one specimen was on exhibit at the Sul Ross State College Museum in Alpine, Texas, in 1940. The center of distribution of the small notched end scrapers seems to be farther south, possibly in the state of San Luis Potosí (Beatrix Brunell, personal communication); Avelraya found several in the Laguna District (Avelraya et al., 1956, p. 75, figs. 7, 9), but the Coahuila specimens seem to be the feather

edge of the range (W. W. Taylor and González Bal, 1980). Basin metates, basin manos, bedrock mortar holes, rock midden circles all seem to be more common in the northern and western sectors of Coahuila, i.e., near Rio Grande and Trans-Pecos of Texas, particularly the Conchos-Rio Grande confluence. In this region there are exposures of the types of extrusive rocks used to make these manos. Ceramics are scarce in Coahuila and all are surface material, including the two sherds found in the Candelería burial cave (Bernal in Avelraya et al., 1956, p. 205). Pottery is of several kinds, only two of which are known at the present time to have relationships elsewhere: El Paso Brown typical of the Jornada Branch (Lehmer, 1949, p. 94), this particular variety dating from the 12th century (Mera, letter of April 8, 1945), and another rather generic, undated type, both unpainted and painted red, which has been identified as relating to the brown ware sites of southern New Mexico (Mera, ibid.; Jennings and Neumann, 1940, p. 6). There is no way at present to associate this pottery definitely with any other cultural material from Coahuila since it has not been found in situ; however, its distribution and the nature of the sites and associated surface material point to its connection with the Jora complex, and possibly with the late Coahuila complex.

The Jora complex, to judge from the very little we know about it, seems to represent a reconstitution and reintegration of culture in (northern) Coahuila. This time, however, outside influences are definitely indicated, unlike the Cienegas complex, for the origin of whose obvious stability and integration we have no signs at all.

Mayan Complex

This material comprises that found by Avelraya in Candelería and Palis caves (Avelraya et al., 1956) and that of the Palmers "mummies" and much of the material recovered by the nonprofessionals working out of Torreon and Saltillo (Studley, 1884; McVeagh, 1956, p. 90, 133 ff.; Barragán, Cárdenas, and Valdés, 1969). An infant burial attributable to the Mayan complex was found in Fat Burro Cave, and a disturbed burial cave (CM-79) with multiple interments and Mayan grave goods was salvaged in west-central Coahuila. Characteristics of it are: elaborately carved netted cloth and loom-woven material including cotton (Barragán, Cárdenas, and Valdés, 1960, fig. 50), large boldly-chipped triangular knives which are often hafted* (fig. 28; Avelraya et al., 1956, pls. 12-14); smushed flake scrapers and small projectile points of Jora complex or Bravo Valley aspect affinities (Avelraya et al., 1956, pls. 4, 7, 9, 11; Barragán, Cárdenas, and Valdés, 1960, fig. 18); a variety of notched and stemmed medium-sized points of Coahuila complex affinities (Avelraya et al., 1956, pls. 1, 2), elaborate bone and shell bead
"Bowers" (ibid., pls. 22-24), bow and arrow, twig-frame net baskets (ibid., p. 153, pl. 46; Barragán, Cardenas, and Valdes, 1960, fig. 25), and an extensive mortuary complex involving bundle burial of whole cadavers (Barragán, Cardenas, and Valdes, 1960, fig. 25) with accompanying grave goods enveloped in textiles and entombed in large numbers probably over a considerable time in limestone caves (often solution cracks), not habitation or even habitable locations. Since there are, in addition to the projectile points, a number of accompanying traits which belong to the Coahuila complex, it is possible that this mortuary complex has some antiquity, although it certainly endured quite late, possibly even as late as the end of the 19th or beginning of the 20th centuries, if we can credit the identity of the two potsherds found in Can-  

Fig. 27—POINTS OF THE JORAN COMPLEX. Top row and second row left: Sieras Maderas (Toyah?). Second row right: Cimarron. Third row: Nopal (Penistep). Last three third row right: Og (Clifford?). Fourth row: El Muro (Freeman). Bottom row: various undated. From Fat Burro Cave, Nopal Shale, CM-59, and CM-67. (Photo, Wyatt Davis, for Smithsonian Institution.)

Fig. 28—STONE ARTIFACTS OF THE MAYER COMPLEX. From CM-88 and CM-96, Palmer Coll., Peabody Museum, Harvard University. (Photo, Wyatt Davis, for Smithsonian Institution.)

Coastal Plain Complex. No excavation has been done in the coastal plain province of Coahuila. Material attributed to this complex comes entirely from surface collecting (Müllerried, 1934). Other surface collections which appear to be typologically like those found on the coastal plain (fig. 29, W. W. Taylor, personal notes; Dudley Jackson, personal notes; Kirk Bryan, personal notes) have been made in the interior regions of Coahuila. On the other hand, those collections are quite similar to some from the Laguna Dis-  

Coastal Plain Material. Skeletal material is not common in Coahuila, and, with the exception of that found with Mayan complex artifacts, its cultural associations are very uncertain. On the sterile gravels at the bottom of Frightful Cave, but in a pit excavated from approximately 50 cm. above, was the burial of an aged female dressed in loincloth and G-string, wrapped in a robe of twisted vegetable fiber, and wearing a pair of two-warp sandals; she was lying flexed on a bed of rocks and twigs; her face had been covered by prickly-pear pads, and a plaited mat had been tucked around and under her head. This was an early or early middle Coahuila complex burial, one of only three known to have been found in situ in occupation sites in Coahuila. Serological tests on desiccated tissue (W. W. Taylor and Boyd, 1943; Boyd, 1959) showed that this person had blood type B; with one example from site CM-506 to Coahuila (W. W. Taylor and Boyd, 1943), one from the Big Bend of Texas (Boyd and Boyd, 1937, Boyd, 1959, p. 249), and examples from the Paracas burials of coastal Peru (Boyd and Boyd, 1937); this is the only test on pre-European American Indian tissue that has shown blood type B. An infant burial in Fat Burro Cave had with it a miniature cradle, two neck ends of arrows and two arrow shafts, a string of corded hoof-covers, a ball of cotton cord, a bone-bead necklace, traces of typical Mayan complex netting, a painted mat of twill plaiting, a rolled basket, several leather strips, the whole was wrapped in the tanned hide of what was apparently a mountain lion (Felis concolor). Most burials, however, were placed in small niches or shelters at some distance from habitation sites. Some seem to have
Also to the two “Coquis” skulls from Ventana Cave (Cable, 1950, p. 513).

Coastal Plain, Jornada, and Coahuila Complex Artifacts. Top two rows: typical surface-collected material from Coastal Plain complex site in western Coahuila, CM-40, 41b, 46, 54, 56, 58. Bottom row: Jornada and Coahuila complex material from central Coahuila, CM-35, CM-63. (Photo, Wyrtz Davis, for Smithsonian Institution.)

been secondary bundle burials; many were enveloped in matting and covered with piles of peat. Gravel goods were scarce, sometimes absent. Several types of artifacts were found consistently with such burials: burial sticks, cordage and/or netting frames, string-groove bone beads of jackrabbit bone, string matting of marshell planks (Cyperaceae, Typhae), plaited matting. In the Laguna District, the type locality for the Mayran complex, burial caves are large and contain many interments, evidently representing long use. The mortuary complex is elaborate, although the burial sticks so characteristic of the northern region have not been found. From this and the rather frequent evidence for the bow and arrow, it appears that these burials and, hence, the Mayran complex are late in Coahuila.

Except for the work of Studley (1884) and Hooten (1930, p. 233 ff.), almost no study has been done on human remains in Coahuila—or in northeast Mexico as a whole. From these scanty data and from the few measurements taken on other Coahuila skeletal materials, it is apparent that the population was dolichocephalic to hyper-dolichocephalic (one cranial index of 64), of small stature, with small cranial capacity, orthognathous, leptoprosopic, and mesorhine. They are quite closely comparable to the Texas Coast, the Abilenos, and the Trans-Pecos series (Woodbury and Woodbury, 1935, p. 35 ff.,) and the Arizona and Pecos Basket Maker series (Hooten, 1930, p. 233 ff.), to the Perico-Lagoa Santa type of Baja California and Brazil respectively (Woodbury and Woodbury, 1935, p. 43), and thus to the two “Coquis” skulls from Ventana Cave (Cable, 1950, p. 513).

MacNeish has set up three series of cultural phases in Tamaulipas (fig. 30). In the southern part of the state, only the earliest material, up to Alagureau times, is typologically Archaic, but in the north this material continues into the historic period. There are certain differences between the Tamaulipas inventories and those from other regions of northeast Mexico and Texas; the cultural manifestations had generic relationships but, by the time of our first information, had developed distinctive subgroupings. Although full documentation is not possible here, the following judgments are based on detailed analysis of published and unpublished material.

Archaic Cultures: Northeastern Frontiers

Cultural and Cultural-Sequence in Tamaulipas

Also to the two “Coquis” skulls from Ventana Cave (Cable, 1950, p. 513).

Coastal Plain, Jornada, and Coahuila Complex Artifacts. Top two rows: typical surface-collected material from Coastal Plain complex site in western Coahuila, CM-40, 41b, 46, 54, 56, 58. Bottom row: Jornada and Coahuila complex material from central Coahuila, CM-35, CM-63. (Photo, Wyrtz Davis, for Smithsonian Institution.)
ANEOLITHIC PERIOD

archeological periods

The Tamaulipan sequence represents a way of life much like that of Coahuila, i.e., largely nomadic with only sporadic, possibly seasonal, use of sheltered sites. In one component of Anahuac times there is evidence for wattle-and-daub houses. Except for the perishable material recovered from a single component, the cultural inventory from Diablo to Anahuac consists almost entirely of stonework, with a very few specimens of bone, antler, and shell. Projectile points followed generally the same sequence as in Coahuila (and to some extent in Trans-Pecos Texas): leaf-shaped points first, then contracting stems, then various medium-to-large-stemmed and notched shapes, and finally small-stemmed and notched types. In Tamaulipas, however, following the leaf-shape points and contemporaneous with the first contracting stems, there is a class of basically triangular points (which has been split into three types on the shape of the base: Ahuacatlan, Nogales, and Tortugas). This general group is numerically dominant in Nogales times onward, continuing as one of the most characteristic shapes until the Mosamean period in the south and the historic period in the north. It constitutes one of the major differences between stone artifacts from Tamaulipas (and possibly from the entire northeastern region of Mexico) and the early complexes of Coahuila. But, by the time of the Mayson and Coastal Plain complexes, these triangular types had reached Coahuila and serve to interrelate many of the late cultural levels throughout northeastern Mexico and southern Texas. In southern Tamaulipas, the pre-Mosamean sequence does not extend to small-point times, but in the north these types are part of the late, but still Archaic, inventory. Notable are the evidences for domesticated plants. Since these specimens of squash (Cucurbita pepo) and maize (Zea-mays types A and B) come from deposits radiocarbon dated at about 2400 B.C., they constitute one of the earliest examples of agriculture in the Americas (Maugulishef, MacNeish, Galbraith, 1956). Faunal and floral waste reflect environmental changes (fig. 19) and indicate subsistence patterns which appear to involve hunting, a small amount of agriculture by at least La Perla times, and a great amount of collecting wild plants.

For the Sierrita Madre of southwestern Tamaulipas, MacNeish set up another eight phases, some of which he says are like phases in the Sierra de Tamaulipas, whereas others fill gaps in that sequence. The finds in the Sierrita Madre produced considerable information, particularly in the way of perishable materials. Domestic goats, squash (C. pepo), chile, and possibly runner beans were recovered from the earliest assemblage, the Infernillo, which yielded radiocarbon dates of 5535 and 6245 B.C. (Crawford and Grillo, 1955a). It is notable that no maize was found in this context; but Cave corn turned up later in the Flaco assemblage, dating around 1850 B.C. (MacNeish, 1958, p. 194). However, MacNeish says that the people from beginning to end of the pre-Mosamean sequence were largely collectors despite their knowledge of agriculture. In fact, contrary to what MacNeish appears to believe, the cultural inventory seems to be remarkably similar to that in the Sierra de Tamaulipas, particularly in stonework but in other categories as well, if due allowance is made for acceptable local variations, the differential occurrence of perishable material, and the differences in inventory completeness which certainly must be assumed. I see no reason to isolate these cryptic variants as to give them names different from those of the Sierra de Tamaulipas, at least according to our present knowledge.

It would seem much better to set up two groupings; Diablo and Lerma in one, Nogales-Ocampo-La Feria-Anahuc--Flaco-Guerrero in the other. Where to put
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Inferrullo is a problem which might be resolved by further excavation, but my present hunch is that it belongs with the second mound because of its obvious affiliations with the Nogales and its greater resemblance to La Perda than to Lemna. However, some new traits do appear, which indicate cultural relationships with other regions of northern Mexico and Texas: net baskets or "purses" on a red foundation from an Inferrullo context are like those in the Mayan complex of Coahuila; cotton, possibly from the Falcó and definitely from the Guerra, has also been found in the Mayan complex, the quahog-breeding dominance of split-stitch and handmade foundation coiled basketry is relatively late, as in the Coahuila complex. It should also be noted that the common bean and possibly mosquitobug squash were found in the Guerra assemblage, from which also came Bat Cave type of maize.

For northern Tamaulipas and adjacent southernmost Texas, MacNeish set up another series of cultural groupings. One phase he identifies with the Nogales phase of the Sierra de Tamaulipas; five others he calls "complexes" because of their relatively uncertain character. Again I feel that this separation and naming of congeries, on the basis of so little real difference in their inventories and in view of the variations and the nature of the sites from which they were collected, is highly suspect. This is even more so when MacNeish begins to look upon them and to treat them as cultural-historical entities, even actual sociopolitical units, talking of them, for example, "the Cataro people" (1958, p. 192). Eleven out of 13 Nogales types are also found in the succeeding Ropelo complex, i.e., only two "Nogales" types (consisting of 10 specimens) are not in both assemblages. Further, when it realized that there are only 61 specimens from all the Nogales phase sites in this northern region, the evidence seems too small and the possibility that purely sampling factors are responsible seems too great to justify the separation, at least at present. MacNeish says that the early assemblages are inland and represent hunting-and-collecting peoples in small to large groups having an essentially nomadic habit. The later people occupied the coastal zone, often camping on the dunes and relying considerably more on seafood. On a number of these later sites, pottery of Huastec type has been found, suggesting either that the people themselves were of southern affiliation or that there was trade between the less elaborated cultures of the north and their more developed neighbors to the south. MacNeish infers that the later population was small and divided into small nomadic bands which had widespread contact with other groups in Texas and along the Río Grande for an appreciable distance upstream from its delta.

Late in 1945, J. T. Hughes made a "highway survey" along the road between Matamoros and Ciudad Victoria, Tamaulipas (J. T. Hughes, 1947). He discovered 11 sites and made lithic collections which are owned by the University of Texas, MacNeish, in his report on the Sierra de Tamaulipas, cited Hughes' material.

South of Reynosa, Tamaulipas, Antonio Espejo, of the Instituto Nacional de Antropología e Historia, Mexico, has found a series of sites at the juncture of the Cuahutén (Tamaulipas) and Lower river (personal communication, 1961). One of those produced true Laanguite and Shumla points. Another site yielded many large, boldly chipped stone blades typical of the Coastal Plain complex of Coahuila and the material from the Falcon reservoir.

In 1950 and again in 1952, Luis Avelleyra, of the same institution, made surface collections on the Mexican side of the Falcon reservoir in Tamaulipas downstream from Nuevo Laredo (Avelleyra, 1951, Rubid de la Borbolla and Avelleyra, 1953). More or less at the same time, on the United States side of the river, archaeologists from the U.S. National Park Service and the University of Texas excavated several sites (Cason, 1952, Krieger and Hughes, 1960). The material is characterized by rather large, boldly chipped blades and triangular points. There are also points very much resembling Pra- gua, Refugio, Abasolo, Almagra, Langtry, and Catán, and there are a few small points after the fashion of Brownsville and Star types (Suhm and Krieger, 1954; MacNeish, 1958, fig. 50). There is a radiocarbon date of about 2700 B.C. for the Falcon focus (Suhm and Krieger, 1954, p. 565).

CULTURE AND CULTURE-SEQUENCE IN TEXAS

A thorough review of the archaeological culture-history of Texas by Jeffs, Davis, and Sturtevant (1960) contains an excellent and lengthy bibliography classified by region, county, culture, and topic. Here I shall summarize this material, with other data from northeastern Mexico, to point up cultural and chronological interrelationships.

A study of the inventories of the various classification units established for the Archaeology of Texas has shown that a certain basic way of life was typical over a wide area and a long period of time and was also related to a similar pattern to the south in Mexico. In earlier publications (1956, 1961), I have said that I believed these manifestations to be derived from a single, basic culture, specifically from the Desert culture. More recent study has further indicated that, within the area embracing Texas and north Mexico, there were at least two phases (the classic and the Desert culture). More recent study has further indicated that, within the area embracing Texas and north Mexico, there were at least two phases of this basic culture, both of which quite certainly stemmed from the common ancestor but each of which, by the period of our first dependable information, had given its own' way to such an extent as to develop what were essentially two second-level basic cultures.

One of these two phases has been named the Balcones phase (Kelley, 1947, p. 99, 1959). This includes the Edwards Plateau aspect, the Ansana focus, and the unpublished Morin focus (Kelley, personal communication). Later manifestations, both on the Gulf coast and inland, seem to be descendants and mixtures of these earlier cultures and, since they are certainly not Mesoamerican, must be considered as pertaining to the Archaic cultures being discussed here.

The other phasing has a provenance largely Mexican. I am calling it the Frontera phase. The recognition of this second-level basic culture seems warranted because a quantitatively significant number of traits characteristic of the Balcones phase are not present, or only rarely so, in the inventories of Frontera phase sites. In the latter, for example, although there is much fire-rock in both sheltered and open sites, there are no great burnt-rock mounds such as are typical of the Edwards Plateau aspect of the Balcones phase in Texas. Basin metates are present only in the later Frontera material and are considered the result of stimulus diffusion from the north, since they appear in company with other northern traits. The typical Balcones phase projectile points—Pepedernales, Taylor, Baird, Nolan, Montell, Frio, Bulverde, and others (Kelley, 1947, p. 104, 1959, fig. 2, legend), Suhm and Krieger, 1954, p. 102)—are not found at all in Coahuila, or only in extremely rare instances quite certainly as intrusives. There is a complete absence of a very noticeable scarcity of such common Balcones implements as stone drills, hand axes, choppers, graviers, Clear Fork gouges, off-center stone knives, picks, boattone, egg-shaped stone pipes, engraved stone tablets, net sinkers, hoes, projectile shaft riders, antler sockets, shell "hobs," and stone-lined pit burials. Balanced against these negative indications, however, are many positive and basic resemblances: the subsistence economy was unmistakably very similar or identical, occupational patterns were the same, and, by inference, socio-political organization must
have been quite similar, basic implements were the same (their differences largely in stylistic variation), methods and materials of manufacture were the same, and the progressive developments of technology ran parallel in the two phasings. If we had more prehistoric materials from Balcones sites, the similarities would probably be even more pronounced.

In this scheme of two generally related but specifically distinct “basic” cultural traditions, the Big Bend aspect (Sulm and Krieger, 1954, p. 52), the Monte aspect (Kelley, 1947, p. 104, note 30, 1950, p. 285), and MacNeish’s Tamaulipas material presents problems, not serious but requiring mention. The Pecos River focus, the earliest in the Big Bend aspect, is obviously a very specialized and localized development (Epstein, 1960a, p. 140, W. W. Taylor and Gonzalez, 1800). It has many unique traits and many others characteristic of both the Balcones and Frontera phases. Without much more information and analysis, there is little hope of resolving this uncertainty. The subsequent Chisos focus presents somewhat the same problem, although in its later assemblages the outside influences are both obvious and strong, especially in the appearance of domestic plants. At present, I would place the Pecos River focus as an extreme and geographically very restricted variant of the Balcones phase and the Chisos focus as a variant of the Huesco phase, obviously another Desert culture but with affinities to the north (Lehner, 1960, p. 127; Sulm and Krieger, 1954, p. 31).

MacNeish’s material from Tamaulipas and the Monte aspect along the Rio Grande (Falcon and Mier foci) also seem to have a basis in the Desert culture, but to which of its two local phrasings they should be attributed is uncertain. Despite an individualized stone industry, particularly a great emphasis on large, boldly chipped blades and medium to large triangular points (characteristics not found in early Coahuila complexes), they appear to be more closely related to the Frontera phase, mostly because they lack the common types of the Balcones phas and because these central Texas types which they do have are obviously imports. Furthermore, they do not have the bent-locked mounds. On a quantitative basis, both in type and frequency, their cultural inventory is much more like Fron- tera than Balcones assemblages. Our scant information on similarities in prehistoric material points in the same direction. Finally, despite the fact that early assemblages in Coahuila lack the large, boldly chipped blades and the triangular points, these types do appear in the Coahuila as a unit in the Jumon and in the Coastal Plain complexes. There is no such “package deal” appearance in Texas. A strong tradition of cultural interchange between Tamaulipas and Coahuila seems to have existed both early (from the west to east) and late (from east to west), but not so strong a one between the Balcones phase cultures and the Fron- tera phase cultures of either Coahuila or Tamaulipas. However, the highly tentative nature of these assignments must be emphasized.

For the culture of Nuevo Leon, we have only the work of J. F. Epstein, of the University of Texas, who conducted a survey in the northern part of the state in the summer of 1900. His findings have not been published but are known through personal communication and a preliminary, mimeographed report. The material has strong similarities with that of the Monte aspect to the north and east and with the Coastal Plain complex of Coahuila. After a little more work in eastern Coahuila, Nuevo Leon, and north- ern Tamaulipas it will probably be shown that the Coastal Plain complex of Coahuila, most of Epstein's material, and the culture of the eastern part of the Rio Grande all belong in the Monte aspect, along with several of MacNeish’s assemblages from inland, north-
least some of the Laguneros or Irritiles of southern Coahuila and quite certainly the Zacatecos, who occupied that area in historic times, spoke Utuztecan. It is also probable that the Utuztecan, Tepehuán, and Tarahumar lived much closer to the Laguna District and thus to the desert peoples of northeastern Mexico than they do today. Taken with the recognized continuity in other aspects of culture in northwestern Mexico and southern Texas, these data suggest that the people of the prehistoric cultures also spoke Hokquatecan and Utuztecan.

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5. Mesoamerica and the Southwestern United States

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The cultures of the American Southwest are geographically peripheral to those of Mesoamerica—and are very nearly geographically contiguous with them. The Southwestern cultures have the general appearance of attenuated Mesoamerican cultures, and the distributional evidence suggests strongly that they are peripheral and reduced copies of Mesoamerican prototypes. Archaeological evidence indicates, however, that they have a respectable antiquity, evolution in site, and perhaps even independent origins. This enigma has puzzled students of American prehistory for almost a century.

Among Southwestern traits especially Mesoamerican in character are: (1) an agricultural economy based on maize-beans-squash agriculture—plus chili and cotton—and, locally, irrigation; (2) permanent houses and villages, with stone and adobe masonry, conventionalized village plans, plazas, and specialized religious structures including platform mounds, kivas, and ball courts; (2) highly developed technology and artistry in stone, bone, shell, ceramics, and textiles; (4) religious art in murals, ceramics, and weaving; (5) highly organized socio-political structures emphasizing village hegemony and dual religious and secular leadership, (6) an organized priesthood, (7) well-developed ceremonials involving cutting societies, fertility cults, hunting and war cults, astronomical and nature deities, rain ceremonies, masked dances, god impersonations, horned or feathered serpent deities, with associated bird and amphibian representations, astronomical- and calendrical conceptions, directional color symbolism, and an organized utilitarian and ceremonial calendar, culture heroes with dual aspects (such as twin war gods), sun worship, fire and harvest ceremonies, scalp ceremonies, and possible vestiges of human sacrifice. There also are highly specific Mesoamerican elements such as copper bells, mosaic mirrors, and conch-shell trumpets.

Regardless of the weight of this evidence, Southwestern archaeologists have tended to explain most of the Southwestern developments in terms of local developments. Thus, considerable evidence for multiple, long, regional, evolutionary, and development models in ceramics, architecture, decorative art, and ceremonialism has been accumulated.